IN THE SPECIFICATION

Please amend the paragraph beginning at page 15, line 25, as follows:

The digital predistorter control part 50 comprises a distortion component detecting part 51 and an odd-order distortion characteristic control part 52. The distortion component detecting part 51 is made up of third-, fifth- and seventh-order distortion component extractors 51A, 51B and 51C. The odd-order distortion characteristic control part 52 is made up of third-, fifth- and seventh-order distortion controllers 52A, 52B and 52C. The odd-order distortion component extractors 51A, 51Band 51C can be formed, for example, by band-pass filters, by which third-, fifth- and seventh-order distortion components are extracted. The odd-order distortion controllers 52A, 52B and 52C control the phase adjusters 23A, 23B, 23C and the ~~variable~~ gain adjusters 24A, 24B, 24C that adjust the phases and amplitudes of the outputs from the distortion component generators 22A, 22B and 22C corresponding to the controllers, respectively.

Please amend the paragraph beginning at page 17, line 25, as follows:

The pilot signal component containing the distortion components is extracted by the directional coupler 38A and the band-pass filter 38B. The extracted pilot signal component is downconverted by the mixer 41 with the local oscillation signal from the local oscillator 33. The input signal to the control part 50, shown in Fig. 6-Row E, is a digitized version of the downconverted signal by the AD converter 44, For example, when distortion compensation for the third-order distortion components P_{D3H} and P_{D3L} is insufficient at the output of the power amplifier 37, they remain unremoved to such an extent as not to be negligible. In the control part 50 one of the third-order distortion components, P_{D3H} in this case, is extracted by the third-order distortion component extractor 51A. The third distortion controller 52A uses the extracted tone signal to control the phase and amplitude of the output from the third

distortion signal generator 22A by the phase adjuster 23A and the ~~variable~~ gain adjuster 24A until the compensated amount of distortion reaches such a value that the adjacent channel leakage power ratio (i.e., the level ratio of the distortion component to the transmission signal) goes down below a predetermined value at the output of the power amplifier 37. To perform this, various optimal algorithms can be used.

Please amend the paragraph beginning at page 18, line 13, as follows:

Fig. 7 is a flowchart showing a linear power amplification procedure including the steps for setting coefficients in the digital predistorter 20 by controlling the phases of the phase adjusters 23A, 23B, 23C and the gains of the ~~variable~~ gain adjusters 24A, 24B, 24C.

Please amend the paragraph beginning at page 30, line 4, as follows:

Turning now to Fig. 18, a description will be given of the principle on which high-precision distortion compensation can be implemented by the frequency characteristic compensator 28 in Fig. 17. Assume that when supplied with the input signal S shown on Row B, the power amplifier 37 of the frequency characteristics shown on Row A generates such a distortion D_S as shown on Row C. To cancel such a distortion D_S, the frequency characteristics of the frequency characteristic compensator 28 are rendered inverse to the frequency characteristics of the power amplifier 37 as shown on Row E, by which the frequency dependent amplitude and phase characteristics of the distortion D by the distortion generator 22 shown on Row D are adjusted to obtain a distortion D′ shown on Row F. The gain adjuster ~~28~~ 24 adjusts the gain of the distortion produced by the distortion generator so that it has a level at which the distortion D_S generated by the power amplifier 37 can be canceled, and the phase adjuster 23 adjusts the frequency characteristics of the frequency characteristic compensator 28 to be inverse to the frequency characteristics of the power

amplifier 37. D′ indicates the adjusted characteristics. As a result, the output S+D′ from the combiner 25 is a combined version of the frequency-characteristic-compensated distortion D′ and the signal S as shown on Row G. The combined signal S+D′ applied via the DA converter 31 to the power amplifier 37, by which the frequency characteristics of the power amplifier 37 can be cancelled; accordingly, in the output S_A from the power amplifier 37 there is cancelled the distortion as shown on Row H.

Please amend the paragraph beginning at page 31, line 26, as follows:

The output signal from the power amplifier 37 is extracted by the directional coupler 38A and the band-pass filter 38B, and the extracted signal is downconverted by the frequency downconverting part 40. The input signal to the digital predistorter control part 50 is a digitized version of the downconverted signal by the AD converter 44. The digital predistorter control part 50 is made up of odd-order distortion component extractors 51A, 51B and 51C each formed by a distortion component extracting band-pass filter; distortion controllers 52A, 52B and 52C corresponding to the respective odd-order distortion components; and coefficient controllers 53A, 53B and 53C for controlling the coefficients of the FIR filters 28A, 28B and 28C of the respective odd orders. The odd-order distortion controllers 52A, 52B and 52C each control the corresponding ones of the ~~variable~~ gain adjusters 24A, 24B, 24C and the phase adjusters 23A, 23B, 23C for the outputs from the distortion generators 22A, 22B and 22C in the digital predistorter 20. Incidentally, the odd-order distortion controllers 52A, 52B, 52C and the coefficient controllers 53A, 53B, 53C constitute the distortion characteristic controller 5 in Fig. 17.

Please amend the paragraph beginning at page 39, line 14, as follows:

To cancel the intermodulation distortions P_{D3H} and P_{D3L}, the predistorter 20 outputs a signal with compensation distortions D_L' and $_DH'$ added to the pilot signals PL_1 and PL_2 (Row C). This signal is upconverted in the frequency upconverting part 33, and the upconverted signal is applied to the power amplifier 37. The output signal from the power amplifier 37 becomes a signal compensated for by the digital predistorter 20 (Row D). The gain adjuster 24, the phase adjuster 23 and the frequency characteristic compensator 28 are adjusted in a manner to cancel the intermodulation distortions P_{D3H} and P_{D3L}. Incidentally, the gain adjuster 24 impart a fixed gain G to frequency, and the phase adjuster ~~24~~ 23 impart a fixed phase change P to frequency.

Please amend the paragraph beginning at page 48, line 9, as follows:

Fig. 33 is a flowchart showing a control procedure for ~~setting~~ determining the characteristics of the frequency characteristic compensators 28A, 28B and 28C in the Fig. 32 embodiment. This ~~setting~~ determination of the characteristics takes place during a non-signal transmission period.

Please insert the following paragraph beginning at page 49, line 21:

Thus stored values are interpolated to obtain a frequency characteristic, which is set to the frequency characteristic compensator in the same manner as described with the tenth embodiment.